

We claim:

1. A conveyor belt for moving food items through a heating zone in a contact toaster, the belt comprising:

    a reinforcement material having two faces;

    a coating disposed over at least one face; and

    a multiplicity of ribs raised above at least one of the coated faces;

    wherein the belt is configured to move the food items through the heating zone.

2. A conveyor belt according to claim 1, wherein the reinforcement material is comprised of fiberglass, nylon, polyester, aramid, polyethylene, polyolefins, polyimides, or films thereof.

3. A conveyor belt according to claim 1, wherein the coating is comprised of silicone rubbers, urethane rubbers, or fluoropolymer, including fluoroplastics (such as PTFE) and fluoroelastomers, or blends thereof.

4. A conveyor belt according to claim 3, wherein the ribs are comprised of at least one of a silicone rubbers, urethane rubbers, and fluoropolymers.

5. A conveyor belt according to claim 4, wherein the coating and the ribs are comprised of different materials.

6. A conveyor belt according to claim 4, wherein the coating and the ribs are comprised of a liquid silicone rubber formulation.

7. A conveyor belt according to claim 4, wherein the coating and the ribs are comprised of a polytetrafluoroethylene.

8. A conveyor belt according to claim 4, wherein the ribs are comprised of low density polytetrafluoroethylene.

9. A conveyor belt according to claim 1, wherein the reinforcement material is comprised of fiberglass and the coating and ribs are comprised of silicone rubber.

10. A conveyor belt according to claim 1, wherein the ribs are arranged in a regular, repeating, natural, random, or cyclical pattern or combinations thereof.

11. A conveyor belt according to claim 1, wherein the ribs form a pattern of a series of straight, parallel, essentially parallel, undulating, zigzag, or sinusoidal ribs or combinations thereof.
12. A conveyor belt according to claim 1, wherein the longitudinal direction of the ribs is perpendicular to the longitudinal direction of the conveyor belt.
13. A conveyor belt according to claim 1, wherein the conveyor belt comprises two coated faces, each face including ribs raised above the surface of the face, wherein the ribs of one face are straight and parallel to each other and the longitudinal direction of the ribs is perpendicular to the longitudinal direction of the conveyor belt, and the ribs of the second face are arranged in a repeating, sinusoidal pattern.
14. A conveyor belt according to claim 1, further comprising a second multiplicity of ribs raised above at least one of the coated faces, wherein the multiplicity of ribs are raised above a first face of the reinforcement material and the second multiplicity of ribs are raised above a second face of the reinforcement material.
15. A conveyor belt according to claim 14, wherein the coating disposed over at least one face of the reinforcement material and the second multiplicity of ribs are comprised of a liquid silicone rubber formulation.
16. A conveyor belt according to claim 1, wherein the multiplicity of ribs have a height of about 0.020 inches to about 0.050 inches.
17. A conveyor belt according to claim 1, wherein the belt is configured to be coupled to a second belt of the contact toaster, the second belt comprising at least one of a chain belt, wire belt, and metal belt.
18. A conveyor belt according to claim 1, wherein the belt is configured to contact a first face of the food item so that the toaster caramelizes a second face of the food item.

19. A contact toaster for toasting a food product having a first surface and a second surface opposite the first surface, the contact toaster comprising:

a heating element configured to toast the first face of the food product;

a first belt, the belt comprising,

a reinforcement material having a first face and a second face;

a coating disposed over the first face;

a first plurality of flights raised above the first face of the reinforcement material;

at least one flight raised above the second face of the reinforcement material; and

a second belt;

wherein the first face of the first belt is configured to contact the second surface of the food product and the second face of the first belt is configured to contact the second belt.

20. The contact toaster of claim 19, wherein the coating disposed over the first face is silicone.

21. The contact toaster of claim 20, wherein the first plurality of flights comprise silicone.

22. The contact toaster of claim 21, wherein the first plurality of flights have a height of about 0.020 inches to about 0.050 inches.

23. The contact toaster of claim 22, wherein the first plurality of flights have a curved shape.

24. The contact toaster of claim 22, wherein the first plurality of flights comprise a plurality of flights parallel to each other.

25. The contact toaster of claim 22, wherein a pigment of the coating disposed over the first face is different than a pigment of the first plurality of flights.

26. The contact toaster of claim 22, wherein the reinforcement material has a thickness of about 0.010 inches to about 0.012 inches when coated.

27. The contact toaster of claim 21, wherein the second belt comprises at least one of a chain belt, a wire belt, and a metal belt.

28. The contact toaster of claim 19, wherein the contact toaster is configured to toast bread products.

29. The contact toaster of claim 19, wherein,

the contact toaster is configured to be capable of simultaneously toasting a first food product in contact with the first belt and a second food product in contact with a third belt; and

the third belt comprises a reinforcement material having a first face and a second face, a coating disposed over the first face, a plurality of flights raised above the first face of the reinforcement material, and at least one flight raised above the second face of the reinforcement material.

30. The contact toaster of claim 19, comprising a plurality of flights raised above the second face of the reinforcement material.

31. A belt for use in a high temperature food processing apparatus configured to process a food product, the belt comprising:

a reinforcement material having a first face and a second face;

a coating disposed over the first face;

a first plurality of flights raised above the first face of the reinforcement material; and

at least one flight raised above the second face of the reinforcement material;

wherein the belt is configured to move the food product through the high temperature food processing apparatus.

32. The belt of claim 31, wherein the second face is configured to be coupled to a second belt comprising at least one of a chain belt, a wire belt, and a metal belt.

33. The belt of claim 31, wherein the first plurality of flights have a sufficient density such that a rib would always be in contact with a hamburger bun.

34. The belt of claim 31, wherein the belt is configured to contact a first surface of the food product and the food product will be toasted on a second surface of the food product.

35. The belt of claim 31, wherein the first plurality of flights have a height of about 0.020 inches to about 0.050 inches.

36. The belt of claim 31, wherein the first plurality of flights have a curved shape.

37. The belt of claim 31, wherein the first plurality of flights comprise a plurality of flights parallel to each other.

38. The belt of claim 31, wherein a pigment of the coating disposed over the first face is different than a pigment of the first plurality of flights.

39. The belt of claim 31, wherein the coating disposed over the first face is silicone.

40. The belt of claim 39, wherein the first plurality of flights comprise silicone.
41. The belt of claim 40, wherein the first plurality of flights are discontinuous.
42. The belt of claim 31, comprising a plurality of flights raised above the second face of the reinforcement material.

43. A belt for use in a high temperature food processing apparatus configured to process a food product, the belt comprising:

a reinforcement material having a first face and a second face;

a coating disposed over the first face, the coating comprising silicone;

a first plurality of flights raised above the first face of the reinforcement material, the first plurality of flights comprising silicone, having a curved shape, having a density of at least one rib per linear foot, being raised above the first face by about 0.020 inches to about 0.050 inches, and being substantially parallel; and

a second plurality of flights raised above the second face of the reinforcement material, the second plurality of flights comprising silicone;

wherein the belt can withstand temperatures of at least 300 deg. F.

44. The belt of claim 43, wherein the first plurality of flights are discontinuous.

45. The belt of claim 43, wherein a pigment of the coating disposed over the first face is different than a pigment of the first plurality of flights.

46. The belt of claim 43, wherein the belt is configured to contact an outer uncut surface of a roll half and provide lateral force to the roll half such that the roll half slides with its cut surface along a toasting surface.

47. A high temperature food processing apparatus configured to process a food product, the apparatus comprising:

a heating zone configured to process the food item; and

a belt configured to move the food product through the heating zone, the belt comprising,

a reinforcement material having a first face and a second face;

a coating disposed over the first face, the coating comprising silicone;

a first plurality of flights raised above the first face of the reinforcement material, the first plurality of flights comprising silicone, having a curved shape, having a density of at least one rib per linear foot, being raised above the first face by about 0.020 inches to about 0.050 inches, and being substantially parallel; and

a second plurality of flights raised above the second face of the reinforcement material, the second plurality of flights comprising silicone;

wherein the belt can withstand temperatures of at least 300 deg. F.

48. A high temperature food processing apparatus configured to process a food product, the apparatus comprising:

a heating zone configured to process the food item; and

a belt configured to move the food product through the heating zone, the belt comprising,

a reinforcement material having a first face and a second face;

a coating disposed over the first face;

a first plurality of flights raised above the first face of the reinforcement material; and

a second plurality of flights raised above the second face of the reinforcement material;

wherein the belt is configured to withstand the temperatures of the heating zone.